SEQUENCE LISTING

<110> Lee, Richard T.

<120> CARDIOVASCULAR DISEASE DIAGNOSTIC AND THERAPEUTIC TARGETS

<130> B0801/7231/ERP/KA

<150> US 60/247,457
<151> 2000-11-09

<160> 33

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 2586
<212> DNA
<213> Rattus norvegicus

<220>
<221> mRNA
<222> (1)...(2586)
<223> Fit-1S

<400> 1

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gaaaacgagg ctttaattgt cagatgcccc caaagaggag gtgcgattaa ccctgtggaa     360
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ccattttaaa agagtagaga aaacatgata tttttaccct taacactctc ttatgatact    1740
aaccactgcc tcaatggcaa tacaactaat gtaaaaacat tattttaact tctttcaaat    1800
atcaagaggg tgtggaaggg agagagacac tgactctaag ctcatagtga tatgtggggc    1860
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<210> 2
<211> 336
<212> PRT
<213> Rattus norvegicus

<220>
<221> PEPTIDE
<222> (1)...(336)
<223> Fit-1S

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                20                  25                  30
Leu Glu Asn Glu Ala Leu Ile Val Arg Cys Pro Gln Arg Gly Gly Ala
            35                  40                  45
Ile Asn Pro Val Glu Trp Tyr Tyr Ser Asn Thr Asn Glu Arg Ile Pro
        50                  55                  60
Thr Gln Lys Arg Asn Arg Ile Phe Val Ser Arg Asp Arg Leu Lys Phe
65                  70                  75                  80
Leu Pro Ala Lys Val Glu Asp Ser Gly Ile Tyr Thr Cys Val Ile Arg
                85                  90                  95
Ser Pro Glu Ser Ile Lys Thr Gly Ser Leu Asn Val Thr Ile Tyr Lys
                100                 105                 110
Arg Pro Pro Asn Cys Lys Ile Pro Asp Tyr Met Met Tyr Ser Thr Val
            115                 120                 125
Asp Gly Ser Asp Lys Asn Ser Lys Ile Thr Cys Pro Thr Ile Ala Leu
        130                 135                 140
Tyr Asn Trp Thr Ala Pro Val Gln Trp Phe Lys Asn Cys Lys Ala Leu
145                 150                 155                 160
Gln Gly Pro Arg Phe Arg Ala His Met Ser Tyr Leu Phe Ile Asp Lys
                165                 170                 175
Val Ser His Val Asp Glu Gly Asp Tyr Thr Cys Arg Phe Thr His Thr
                180                 185                 190
Glu Asn Gly Thr Asn Tyr Ile Val Thr Ala Thr Arg Ser Phe Thr Val
            195                 200                 205
Glu Glu Lys Gly Phe Ser Thr Phe Pro Val Ile Thr Asn Pro Pro His
        210                 215                 220
Asn Tyr Thr Val Glu Val Glu Ile Gly Lys Thr Ala Asn Ile Ala Cys
225                 230                 235                 240
Ser Ala Cys Phe Gly Thr Ala Ser Gln Phe Val Ala Val Leu Trp Gln
                245                 250                 255
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Ile Asn Lys Thr Arg Ile Gly Ser Phe Gly Lys Ala Arg Ile Gln Glu
            260             265             270
Glu Lys Gly Pro Asn Lys Ser Ser Ser Asn Gly Met Ile Cys Leu Thr
            275             280             285
Ser Leu Leu Arg Ile Thr Gly Val Thr Asp Lys Asp Phe Ser Leu Lys
            290             295             300
Tyr Asp Cys Val Ala Met Asn His His Gly Val Ile Arg His Pro Val
305             310             315             320
Arg Leu Arg Arg Lys Gln Pro Ser Lys Glu Cys Leu Ser Gln Ile Ala
            325             330             335
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<210> 3
<211> 2065
<212> DNA
<213> Rattus norvegicus

<220>
<221> mRNA
<222> (1)...(2065)
<223> Fit-1M

<400> 3
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agatgcacct acccggcagg ggtgaaatcc caagctacac tgatttctct tttggaccct     180
acatcagaca gcacacatca accgcctagt ggactcaccg ttaccttcct gtgccattgc     240
catcggagag atctcggcca tcaatcacta gcacatgatt ggcaaatgga gaatggggct     300
ttgggctttg gcaattctga cagttcccat gtatttcata gtgacagagg gcagaaaaac     360
atcctggggt ctagaaaacg aggctttaat tgtcagatgc cccaaagag  gaggtgcgat     420
taaccctgtg gaatggtatt attcaaatac aaatgaaaga attcctactc aaaagagaaa     480
tcggatcttc gtctcaagag atcgtctgaa gtttctacca gccaaagtgg aagactctgg     540
gatttatacg tgtgttatca gaagccctga atcgattaag accggatctt tgaatgtcac     600
catatataaa agaccaccaa actgcaaaat ccctgattac atgatgtact cgacagtaga     660
tggatcagat aaaaattcca agataacatg tccaacaatt gccttgtata attggacagc     720
gcctgttcag tggtttaaga actgcaaagc tctccaaggg ccaaggttca gggcacacat     780
gtcctatttg ttcattgaca aagtgagtca tgttgatgaa ggtgactaca catgtcgatt     840
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agtggaaata ggaaaaacag caaacattgc ctgctcagct tgctttggca cagcctctca    1020
gttcgttgct gtcctgtggc agattaacaa aacgagaatt ggatcttttg gcaaagcaag    1080
aattcaagaa gagaaaggcc caaataaaag ttccagcaat ggcatgattt gcttaacctc    1140
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catgaaccat cacggagtga taaggcaccc cgtaagactg agaaggaaac aaccaattga    1260
ccaccaaagc acctactaca tagttgccgg atgtagttta ttgctaatgt ttatcaatgt    1320
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gcctgggcaa gatgcggcca ctgtggtgga aagcagtatc cagaatagta gacggcaagt    1620
gtttgtcctg gcccctcaca tgatgcacag caaagagttt gcctatgagc aggagatcgc    1680
cctgcacagc gccctcatcc agaacaactc caaggtgatt ctgattgaaa tggagcctat    1740
gggtgaggca agccgactgc agcttgggga tctgcaagat tctctccagc atcttgtgaa    1800
aatgcagggg accatcaagt ggaggaagga ccacgtggcc gacaaacagt ctctaagctc    1860
caaattctgg aagcatgtga gataccaaat gccagtcccg aaaagacccc caagatggc     1920
atctgttgcc gctccgttga gtggcaaggt gtgcttggac ctgaaacact tttgagtcgt    1980
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gacttgaaat gccaagggtg gggcc                                          2065
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<210> 4
<211> 566
<212> PRT
<213> Rattus norvegicus

<220>
<221> PEPTIDE
<222> (1)...(566)
<223> Fit-1M

<400> 4
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            20                  25                  30
Leu Glu Asn Glu Ala Leu Ile Val Arg Cys Pro Gln Arg Gly Gly Ala
        35                  40                  45
Ile Asn Pro Val Glu Trp Tyr Tyr Ser Asn Thr Asn Glu Arg Ile Pro
    50                  55                  60
Thr Gln Lys Arg Asn Arg Ile Phe Val Ser Arg Asp Arg Leu Lys Phe
65                  70                  75                  80
Leu Pro Ala Lys Val Glu Asp Ser Gly Ile Tyr Thr Cys Val Ile Arg
            85                  90                  95
Ser Pro Glu Ser Ile Lys Thr Gly Ser Leu Asn Val Thr Ile Tyr Lys
            100                 105                 110
Arg Pro Pro Asn Cys Lys Ile Pro Asp Tyr Met Met Tyr Ser Thr Val
        115                 120                 125
Asp Gly Ser Asp Lys Asn Ser Lys Ile Thr Cys Pro Thr Ile Ala Leu
    130                 135                 140
Tyr Asn Trp Thr Ala Pro Val Gln Trp Phe Lys Asn Cys Lys Ala Leu
145                 150                 155                 160
Gln Gly Pro Arg Phe Arg Ala His Met Ser Tyr Leu Phe Ile Asp Lys
            165                 170                 175
Val Ser His Val Asp Glu Gly Asp Tyr Thr Cys Arg Phe Thr His Thr
            180                 185                 190
Glu Asn Gly Thr Asn Tyr Ile Val Thr Ala Thr Arg Ser Phe Thr Val
        195                 200                 205
Glu Glu Lys Gly Phe Ser Thr Phe Pro Val Ile Thr Asn Pro Pro His
    210                 215                 220
Asn Tyr Thr Val Glu Val Glu Ile Gly Lys Thr Ala Asn Ile Ala Cys
225                 230                 235                 240
Ser Ala Cys Phe Gly Thr Ala Ser Gln Phe Val Ala Val Leu Trp Gln
            245                 250                 255
Ile Asn Lys Thr Arg Ile Gly Ser Phe Gly Lys Ala Arg Ile Gln Glu
            260                 265                 270
Glu Lys Gly Pro Asn Lys Ser Ser Ser Asn Gly Met Ile Cys Leu Thr
        275                 280                 285
Ser Leu Leu Arg Ile Thr Gly Val Thr Asp Lys Asp Phe Ser Leu Lys
    290                 295                 300
Tyr Asp Cys Val Ala Met Asn His His Gly Val Ile Arg His Pro Val
305                 310                 315                 320
Arg Leu Arg Arg Lys Gln Pro Ile Asp His Gln Ser Thr Tyr Tyr Ile
            325                 330                 335
Val Ala Gly Cys Ser Leu Leu Leu Met Phe Ile Asn Val Leu Val Ile
            340                 345                 350
Val Leu Lys Val Phe Trp Ile Glu Val Ala Leu Phe Trp Arg Asp Ile
```

```
            355                    360                    365
Met Ala Pro Tyr Lys Thr Gln Asn Asp Gly Lys Leu Tyr Asp Ala Tyr
        370                    375                    380
Ile Ile Tyr Pro Arg Val Phe Arg Gly Ser Ala Ala Gly Thr Gly Ser
385                    390                    395                    400
Val Glu Tyr Phe Val His Tyr Thr Leu Pro Asp Val Leu Glu Asn Lys
                    405                    410                    415
Cys Gly Tyr Lys Leu Cys Ile Tyr Gly Arg Asp Leu Leu Pro Gly Gln
                420                    425                    430
Asp Ala Ala Thr Val Val Glu Ser Ser Ile Gln Asn Ser Arg Arg Gln
                435                    440                    445
Val Phe Val Leu Ala Pro His Met Met His Ser Lys Glu Phe Ala Tyr
        450                    455                    460
Glu Gln Glu Ile Ala Leu His Ser Ala Leu Ile Gln Asn Asn Ser Lys
465                    470                    475                    480
Val Ile Leu Ile Glu Met Glu Pro Met Gly Glu Ala Ser Arg Leu Gln
                485                    490                    495
Leu Gly Asp Leu Gln Asp Ser Leu Gln His Leu Val Lys Met Gln Gly
                500                    505                    510
Thr Ile Lys Trp Arg Glu Asp His Val Ala Asp Lys Gln Ser Leu Ser
                515                    520                    525
Ser Lys Phe Trp Lys His Val Arg Tyr Gln Met Pro Val Pro Lys Arg
        530                    535                    540
Pro Pro Lys Met Ala Ser Val Ala Ala Pro Leu Ser Gly Lys Val Cys
545                    550                    555                    560
Leu Asp Leu Lys His Phe
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<210> 5
<211> 1614
<212> DNA
<213> Rattus norvegicus

<220>
<221> mRNA
<222> (1)...(1614)
<223> vacuolar ATPase

<400> 5
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gccggaacta cctctcccag cctcgtctca cctacaagac tgtctctgga gtgaatggtc   180
cactagtgat cttagatcat gtaaagtttc ccagatatgc tgagattgtc cacttgacat   240
taccagatgg cacaaaaaga agtgggcaag ttctagaagt tagtggctcc aaagctgtgg   300
ttcaggtatt tgaaggaaca tccggcatag atgccaagaa aacatcctgt gagtttactg   360
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gaaaacccat tgaccgaggt cctgtggtgt tggccgaaga cttccttgac atcatgggtc   480
agccaatcaa ccctcagtgt cgcatctacc agaagagat gattcagacg ggcatttctg   540
ccatcgacgg catgaacagt attgcgaggg gacagaaaat ccccatcttt tctgctgccg   600
ggttaccaca caacgagatt gcagctcaga tctgtcgcca ggctggtttg gtaaagaaat   660
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aggttcctgg tcggcgaggc ttccccggct acatgtatac ggatttagcc accatctatg  1020
aacgcgctgg gcgagtggaa ggtagaaatg gctctattac ccaaatccct attctcacca  1080
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tgcccaatga tgatatcact catcctatcc ctgacttgac tgggtatatt actgagggcc    1140
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cctcactctc tcggttaatg aagtcagcta ttggagaagg aatgaccagg aaggatcatg    1260
ctgatgtgtc taaccagttg tacgcatgct atgctatcgg taaggatgtg caagccatga    1320
aagctgtggt gggagaagaa gccctgacct cagatgacct cctttacttg gaatttctgc    1380
agaagtttga gaaaaacttc attactcagg gtccctatga aaatcgaact gtctatgaga    1440
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ctcagagtac cctgagcgaa ttttaccctc gagactctgc aaagcactag ctgctgctgc    1560
ttgtgcggct cgaccctctt gtgaagtgct ggttctgttt cctgattcct tttg          1614
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<210> 6
<211> 511
<212> PRT
<213> Rattus norvegicus

<220>
<221> PEPTIDE
<222> (1)...(511)
<223> vacuolar ATPase

<400> 6
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            20                  25                  30
Leu Ala Val Ser Arg Asn Tyr Leu Ser Gln Pro Arg Leu Thr Tyr Lys
        35                  40                  45
Thr Val Ser Gly Val Asn Gly Pro Leu Val Ile Leu Asp His Val Lys
    50                  55                  60
Phe Pro Arg Tyr Ala Glu Ile Val His Leu Thr Leu Pro Asp Gly Thr
65                  70                  75                  80
Lys Arg Ser Gly Gln Val Leu Glu Val Ser Gly Ser Lys Ala Val Val
                85                  90                  95
Gln Val Phe Glu Gly Thr Ser Gly Ile Asp Ala Lys Lys Thr Ser Cys
            100                 105                 110
Glu Phe Thr Gly Asp Ile Leu Arg Thr Pro Val Ser Glu Asp Met Leu
        115                 120                 125
Gly Arg Val Phe Asn Gly Ser Gly Lys Pro Ile Asp Arg Gly Pro Val
    130                 135                 140
Val Leu Ala Glu Asp Phe Leu Asp Ile Met Gly Gln Pro Ile Asn Pro
145                 150                 155                 160
Gln Cys Arg Ile Tyr Pro Glu Glu Met Ile Gln Thr Gly Ile Ser Ala
                165                 170                 175
Ile Asp Gly Met Asn Ser Ile Ala Arg Gly Gln Lys Ile Pro Ile Phe
            180                 185                 190
Ser Ala Ala Gly Leu Pro His Asn Glu Ile Ala Ala Gln Ile Cys Arg
        195                 200                 205
Gln Ala Gly Leu Val Lys Lys Ser Lys Asp Val Val Asp Tyr Ser Glu
    210                 215                 220
Glu Asn Phe Ala Ile Val Phe Ala Ala Met Gly Val Asn Met Glu Thr
225                 230                 235                 240
Ala Arg Phe Phe Lys Ser Asp Phe Glu Glu Asn Gly Ser Met Asp Asn
                245                 250                 255
Val Cys Leu Phe Leu Asn Leu Ala Asn Asp Pro Thr Ile Glu Arg Ile
            260                 265                 270
Ile Thr Pro Arg Leu Ala Leu Thr Thr Ala Glu Phe Leu Ala Tyr Gln
        275                 280                 285
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Cys Glu Lys His Val Leu Val Ile Leu Thr Asp Met Ser Ser Tyr Ala
    290             295             300
Glu Ala Leu Arg Glu Val Ser Ala Ala Arg Glu Glu Val Pro Gly Arg
305             310             315             320
Arg Gly Phe Pro Gly Tyr Met Tyr Thr Asp Leu Ala Thr Ile Tyr Glu
            325             330             335
Arg Ala Gly Arg Val Glu Gly Arg Asn Gly Ser Ile Thr Gln Ile Pro
            340             345             350
Ile Leu Thr Met Pro Asn Asp Asp Ile Thr His Pro Ile Pro Asp Leu
        355             360             365
Thr Gly Tyr Ile Thr Glu Gly Gln Ile Tyr Val Asp Arg Gln Leu His
    370             375             380
Asn Arg Gln Ile Tyr Pro Pro Ile Asn Val Leu Pro Ser Leu Ser Arg
385             390             395             400
Leu Met Lys Ser Ala Ile Gly Glu Gly Met Thr Arg Lys Asp His Ala
            405             410             415
Asp Val Ser Asn Gln Leu Tyr Ala Cys Tyr Ala Ile Gly Lys Asp Val
            420             425             430
Gln Ala Met Lys Ala Val Val Gly Glu Glu Ala Leu Thr Ser Asp Asp
            435             440             445
Leu Leu Tyr Leu Glu Phe Leu Gln Lys Phe Glu Lys Asn Phe Ile Thr
    450             455             460
Gln Gly Pro Tyr Glu Asn Arg Thr Val Tyr Glu Thr Leu Asp Ile Gly
465             470             475             480
Trp Gln Leu Leu Arg Ile Phe Pro Lys Glu Met Leu Lys Arg Ile Pro
            485             490             495
Gln Ser Thr Leu Ser Glu Phe Tyr Pro Arg Asp Ser Ala Lys His
            500             505             510
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<210> 7
<211> 2747
<212> DNA
<213> Rattus norvegicus

<220>
<221> mRNA
<222> (1)...(2747)
<223> glycoprotein CD44

<400> 7
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ggtttggtgg cacacagctt ggggactact ttgcctctta cagttgagcc tggcacagca     180
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cgatggacca gttaccataa ctattgtcaa ccgtgatggc acccgctaca gcaagaaggg     600
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cagtggatcc accattgaga agagcacccc agaaggctac attttgcaca ccgaccttcc     720
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tgcgaggaga cctcagattc cagagtggct tatcatcttg catccctcc tggcgctggc     960
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ggtgtagtgc ctatgccact aacttgaaaa gacacaacaa ttggagacat gtcattactg    1260
ggagctggga cccttaacag atgcaatgtg ctactgatta ttttttattg ggattatttt    1320
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cattgctttc tgaaatgagg gtctcttcca gttcctcctt agaggccttg cattaccagg    1440
gtatgctacc ataggcttct accaaatgaa tactcttggt cccgattgaa cccaaagtcc    1500
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atttccacat gcttctgaga gattccccaa aggtgacgct atttatcttt agtaagctat    1740
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gtttctaaat cagcaaggtc tgagtctttg tagcacatca atgtgacctt agtatggtcc    1980
tctgaaactc atgttagagc atccgtgccc tgcttggggtt tacccagctg aatctcagaa    2040
gatcaaggac aggagcactg ttttcattct aggactatca aagggctttc tctcctgttc    2100
aagaatctga attgggagta ggagagcttc tgtccctttt atgtttcgat aaccacccat    2160
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atagacactg atcttattgg cactttcaca aaacagtgtg gaggggactt ctgacacctt    2280
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aaggctttct ctaaaatgga acttccttttc taaggctccc atttttactg ttgactaaat    2700
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<210> 8
<211> 364
<212> PRT
<213> Rattus norvegicus

<220>
<221> PEPTIDE
<222> (1)...(364)
<223> glycoprotein CD44

<400> 8
Met Asp Lys Val Trp Trp His Thr Ala Trp Gly Leu Leu Cys Leu Leu
1               5                   10                  15
Gln Leu Ser Leu Ala Gln Gln Gln Ile Asp Leu Asn Ile Thr Cys Arg
            20                  25                  30
Tyr Ala Gly Val Phe His Val Glu Lys Asn Gly Arg Tyr Ser Ile Ser
        35                  40                  45
Arg Thr Glu Ala Ala Asp Leu Cys Glu Ala Phe Asn Thr Thr Leu Pro
    50                  55                  60
Thr Met Ala Gln Met Glu Leu Ala Leu Arg Lys Gly Phe Glu Thr Cys
65                  70                  75                  80
Arg Tyr Gly Phe Ile Glu Gly His Val Val Ile Pro Arg Ile His Pro
                85                  90                  95
Asn Ala Ile Cys Ala Ala Asn Asn Thr Gly Val Tyr Ile Leu Leu Ala
                100                 105                 110
Ser Asn Thr Ser His Tyr Asp Thr Tyr Cys Phe Asn Ala Ser Ala Pro
            115                 120                 125
```

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Leu Glu Glu Asp Cys Thr Ser Val Thr Asp Leu Pro Asn Ser Phe Asp
    130                 135             140
Gly Pro Val Thr Ile Thr Ile Val Asn Arg Asp Gly Thr Arg Tyr Ser
145         .           150             155             160
Lys Lys Gly Glu Tyr Arg Thr His Gln Glu Asp Ile Asp Ala Ser Asn
                165             170             175
Ile Ile Asp Glu Asp Val Ser Ser Gly Ser Thr Ile Glu Lys Ser Thr
            180             185             190
Pro Glu Gly Tyr Ile Leu His Thr Asp Leu Pro Thr Ser Gln Pro Thr
        195             200             205
Gly Asp Arg Asp Asp Ala Phe Phe Ile Gly Ser Thr Leu Ala Thr Ser
    210             215             220
Asp Gly Asp Ser Ser Met Asp Pro Arg Gly Gly Phe Asp Thr Val Thr
225             230             235             240
His Gly Ser Glu Leu Ala Gly His Ser Ser Gly Asn Gln Asp Ser Gly
            245             250             255
Val Thr Thr Thr Ser Gly Pro Ala Arg Arg Pro Gln Ile Pro Glu Trp
            260             265             270
Leu Ile Ile Leu Ala Ser Leu Leu Ala Leu Ala Leu Ile Leu Ala Val
        275             280             285
Cys Ile Ala Val Asn Ser Arg Arg Arg Cys Gly Gln Lys Lys Lys Leu
    290             295             300
Val Ile Asn Ser Gly Asn Gly Thr Val Glu Asp Arg Lys Pro Ser Glu
305             310             315             320
Leu Asn Gly Glu Ala Ser Lys Ser Gln Glu Met Val His Leu Val Asn
            325             330             335
Lys Glu Pro Thr Glu Thr Pro Asp Gln Phe Met Thr Ala Asp Glu Thr
            340             345             350
Arg Asn Leu Gln Ser Val Asp Met Lys Ile Gly Val
            355             360
```

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<210> 9
<211> 5028
<212> DNA
<213> Rattus norvegicus

<220>
<221> mRNA
<222> (1)...(5028)
<223> Lot-1

<400> 9
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ggagcggaga gcgggcatct cctgagcgcc gtcatggctg cttaggctgc gcctgccagc     120
ggaccgacgg tgtcgcccga atccggctcg gataggtctg gttggagtct gtgcctgctt     180
gcttggcgtg tggttgttcc tgcttgattg cacggtgcc attggcttcg tatttgggaa      240
tcggaggagt taatcttgtc tcttctcaca ggttcgagtc ctcagacctt ctgcaggact     300
ccatccatat ctgcctcgca gctgactctc ctgctcacac agaagacggc catcctagat     360
ccccagctat tgtgctgacc atccccttcc tgctccggat ctcgcctggc tgctaggctg     420
tggtgctgcc ttttcagagt caggctgtag cgactccccg ccttcgtccc ggctgggctt     480
aggtggaaca gtggttcatc tcatctcatc agcacttctg aagaagaaag tgtgagaagc     540
agaggccatg gctccttttc gctgtcaaaa atgcggcaag tccttcctca ccctggagaa     600
gttcaccatc cacaattatt cccacaccag ggagcgccca ttcaagtgct ccaagactga     660
gtgtggcaaa gccttcgtct ccaagtataa gctgatgaga cacatggcta cgcactctcc     720
ccagaagacg caccagtgca ctcattgtga aaagactttc aaccggaagg atcatctgaa     780
gaatcacctc cagacccacg atcccaacaa gatgatctac gcctgcgaag attgtggcaa     840
gaaataccac accatgctgg gctacaagag cacatggcc ctgcattcgg ccagcagcgg      900
```

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cgatctcacc tgcggcgtct gcaccctgga gctggggagc accgaggtcc tgctggacca      960
cctcaagtct cacgcggaag aaaaggccca ccacgcgccc agggagaaga aacaccagtg     1020
cgaccactgc gagagatgct tctacacccg gaaggatgtg cgtcgccacc tggtggtcca     1080
cacaggatgc aaggacttcc tgtgtcagtt ctgcgcccag agatttgggc gcaaagacca     1140
cctcactcgt cacaccaaga agacccactc ccaggagctg atgcaagaga gcctgcaagc     1200
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gccccagctg ctgccccagc tgcagcccga gcctgagcca gagccagagc cagaggaaga     2040
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gactctgtat tccgttttg agattttttt ccctcagcat atataccca accttgaag       4200
actctgtatt tcattttga acttttttcc cagcatatat accctaacct ttgaagactc     4260
tgtattccat ttttgagatt ttttccctca gcatatatac cctaacctttt gaagactctg    4320
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tatttcgttt ttgagatttt ttcccccagc atataaacac taacctttga agactctgta    4380
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ctgtattcca tttttttgaga cttttttccc cagcatatat accctaacct ttgaagactc    4560
tgtatttcat ttttgagact ttttccccag catatatacc ctaacctttg aagactctgt    4620
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ttgaagaccc tgtatttcgt ttgtaagact tttcccccagc atatatatcc tacatataat    4920
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa                5028
```

```
<210> 10
<211> 583
<212> PRT
<213> Rattus norvegicus

<220>
<221> PEPTIDE
<222> (1)...(583)
<223> Lot-1

<400> 10
Met Ala Pro Phe Arg Cys Gln Lys Cys Gly Lys Ser Phe Leu Thr Leu
1               5                   10                  15
Glu Lys Phe Thr Ile His Asn Tyr Ser His Thr Arg Glu Arg Pro Phe
                20                  25                  30
Lys Cys Ser Lys Thr Glu Cys Gly Lys Ala Phe Val Ser Lys Tyr Lys
            35                  40                  45
Leu Met Arg His Met Ala Thr His Ser Pro Gln Lys Thr His Gln Cys
        50                  55                  60
Thr His Cys Glu Lys Thr Phe Asn Arg Lys Asp His Leu Lys Asn His
65                  70                  75                  80
Leu Gln Thr His Asp Pro Asn Lys Met Ile Tyr Ala Cys Glu Asp Cys
                85                  90                  95
Gly Lys Lys Tyr His Thr Met Leu Gly Tyr Lys Arg His Met Ala Leu
            100                 105                 110
His Ser Ala Ser Ser Gly Asp Leu Thr Cys Gly Val Cys Thr Leu Glu
        115                 120                 125
Leu Gly Ser Thr Glu Val Leu Leu Asp His Leu Lys Ser His Ala Glu
    130                 135                 140
Glu Lys Ala His His Ala Pro Arg Glu Lys Lys His Gln Cys Asp His
145                 150                 155                 160
Cys Glu Arg Cys Phe Tyr Thr Arg Lys Asp Val Arg Arg His Leu Val
                165                 170                 175
Val His Thr Gly Cys Lys Asp Phe Leu Cys Gln Phe Cys Ala Gln Arg
            180                 185                 190
Phe Gly Arg Lys Asp His Leu Thr Arg His Thr Lys Lys Thr His Ser
        195                 200                 205
Gln Glu Leu Met Gln Glu Ser Leu Gln Ala Gly Glu Tyr Gln Gly Gly
    210                 215                 220
Tyr Gln Pro Ile Ala Pro Pro Phe Gln Ile Lys Ala Asp Pro Met Pro
225                 230                 235                 240
Pro Phe Gln Leu Glu Met Pro Pro Glu Ser Gly Leu Asp Gly Gly Leu
                245                 250                 255
Pro Pro Glu Ile His Gly Leu Val Leu Ala Ser Pro Glu Glu Val Pro
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                      260                    265                    270
Gln Pro Met Leu Ser Met Pro Pro Met Gln Pro Met Pro Glu Gln Pro
            275                    280                    285
Phe Thr Leu His Pro Gly Val Val Pro Ser Ser Pro Pro Ile Ile
    290                    295                    300
Leu Gln Glu His Lys Tyr Ser Pro Val Pro Thr Ser Phe Ala Pro Phe
305                    310                    315                    320
Val Ser Met Pro Met Lys Ala Asp Leu Lys Gly Phe Cys Asn Met Gly
                325                    330                    335
Leu Phe Glu Glu Phe Pro Leu Gln Glu Cys Gln Ser Pro Val Lys Phe
                340                    345                    350
Ser Gln Cys Phe Glu Met Ala Lys Glu Gly Phe Gly Lys Val Thr Leu
        355                    360                    365
Pro Lys Glu Leu Leu Val Asp Ala Val Asn Ile Ala Ile Pro Gly Ser
    370                    375                    380
Leu Glu Ile Ser Ser Leu Leu Gly Phe Trp Gln Leu Pro Pro Pro Pro
385                    390                    395                    400
Pro Gln Asn Gly Phe Met Asn Gly Thr Ile Pro Val Gly Ala Gly Glu
                405                    410                    415
Pro Leu Pro His Arg Ile Thr Cys Leu Ala Gln Gln Gln Pro Pro Pro
                420                    425                    430
Leu Leu Pro Pro Pro Pro Pro Leu Pro Leu Pro Glu Pro Leu Pro Gln
            435                    440                    445
Pro Gln Leu Pro Pro Gln Phe Gln Leu Gln Leu Gln Pro Gln Pro Gln
    450                    455                    460
Met Gln Pro Gln Met Gln Leu Gln Pro Leu Gln Leu Gln Leu Pro Gln
465                    470                    475                    480
Leu Leu Pro Gln Leu Gln Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu
                485                    490                    495
Glu Glu Glu Glu Glu Glu Glu Glu Ile Glu Glu Glu Glu Glu Ile Glu
                500                    505                    510
Glu Glu Glu Glu Ala Glu Pro Glu Ala Glu Glu Glu Glu Glu Ala Glu
            515                    520                    525
Asp Glu Glu Glu Ala Glu Glu Glu Glu Glu Glu Pro Gln Pro Glu Glu
    530                    535                    540
Ala Gln Ile Ala Met Ser Ala Val Asn Met Gly Gln Pro Pro Leu Pro
545                    550                    555                    560
Pro Thr Pro His Val Phe Thr Ala Gly Thr Asn Thr Ala Ile Leu Pro
                565                    570                    575
His Phe His His Ala Phe Arg
                580
```

```
        <210> 11
        <211> 658
        <212> DNA
        <213> Rattus norvegicus

        <220>
        <221> mRNA
        <222> (1)...(658)
        <223> AA892598 (EST196401)

        <400> 11
acaaacactt tttattttgt ttttaattta gaacatgata catattcaca agatttacac      60
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gctatatata atctgtggta aagtcatagg catcgtcttc ttcactcatt ttatccaaga     180
taaaggatct gtcagatggt ttacttgctg ttgattgccc aggtgacatc tccctggtct     240
```

```
cttctacagg agtcacatct gagatctctg cattttttc accagtaaca tgttcttgat        300
catcaccatc ctgttggtct tctgtctgtt ttggtgactc ttcgggatg tccttttctt        360
ctagtattcc atttgtcagg cccgaagacc ggaaaaggat tttattagtt aaatgagggc       420
ccttgaggac ttgtatgctg tgtgcattat tctttctag ttcttctaga ttaaagcccc         480
tcttcatgat tgctgtaata ttctcattaa aatgaggaga atgattccag gatgcagggg        540
gatggcagta gtaacctaat gaggcacctg tccactcaga ccatagcagc ttagcagcac       600
tttcgacatt tgggcttcca cctttttggt gcagacctct tctctgagca agtttagt         658
```

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        <210> 12
        <211> 480
        <212> DNA
        <213> Rattus norvegicus

        <220>
        <221> mRNA
        <222> (1)...(480)
        <223> AA900476 (Mrg-1)

        <400> 12
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gtgggggcag ggagggtgat ttctttcagc cgcgaggtta accgagtcaa cagctgactc       120
tgctgggctg ctgtttgcac acgaagtccg tcataaaatc aaactcattt tggcccagcc       180
agagttctgg cagctccttg atgcggtcca aacccatctc tatcactaag gacataagca      240
cttcctcgtc gatgaaatca gtgtctatga cattgggcgg cagcattgcc gcggggacgt      300
gagccaccga ggcgggcatg gtgctgccac cgccactgcc gcccgcgctg ctgccacccg      360
cgccgcccga ggtgccgccg gagccgccgg gggtgccgct gccacccgcg ccgccagggg      420
tgctgctgcc tccactgtgc ttggggttgc aatctcggaa gtgctggttt gtcccgttca       480
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```
        <210> 13
        <211> 2646
        <212> DNA
        <213> Mus musculus

        <220>
        <221> mRNA
        <222> (1)...(2646)
        <223> ST2

        <400> 13
gcagaaatga gacgaaggag cgccaagtag cctcacggct ctgagcttat tctctccagc        60
ccttcatctg ggtatctaca gtgatttctc ttctggaccc tacctcagag agcacttgtc       120
aaccgcctag tgaacacacc attactatcc tgtgccattg ccatagagag acctcagcca       180
tcaatcacta gcacatgatt gacagacaga gaatgggact ttgggctttg gcaattctga      240
cacttcccat gtatttgaca gttacggagg gcagtaaatc gtcctggggt ctggaaaatg       300
aggctttaat tgtgagatgc ccccaaagag gacgctcgac ttatcctgtg gaatggtatt       360
actcagatac aaatgaaagt attcctactc aaaaaagaaa tcggatcttt gtctcaagag        420
atcgtctgaa gtttctacca gccagagtgg aagactctgg gatttatgct tgtgttatca       480
gaagccccaa cttgaataag actggatact tgaatgtcac catacataaa aagccgccaa       540
gctgcaatat ccctgattat ttgatgtact cgacagtacg tggatcagat aaaaatttca       600
agataacgtg tccaacaatt gacctgtata attggacagc acctgttcag tggtttaaga       660
actgcaaagc tctccaagag ccaaggttca gggcacacag gtcctacttg ttcattgaca       720
acgtgactca tgatgatgaa ggtgactaca cttgtcaatt cacacacgcg gagaatggaa        780
ccaactacat cgtgacggcc accagatcat tcacagttga agaaaaaggc ttttctatgt       840
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caagtattgc ctgttcagct tgctttggca aaggctctca cttcttggct gatgtcctgt       960
ggcagattaa caaaacagta gttggaaatt ttggtgaagc aagaattcaa gaagaggaag      1020
gtcgaaatga aagttccagc aatgacatgg attgtttaac ctcagtgtta aggataactg     1080
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cactgcctta ctggcaatac aactaatatg aaaacatttt taatttcttt caaatatcaa      1860
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<211> 2681
<212> DNA
<213> Bos taurus

<220>
<221> mRNA
<222> (1)...(2681)
<223> Bovine vacuolar H+-ATPase

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<211> 2594
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)...(2594)
<223> human vacuolar H+-ATPase

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<212> DNA
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<220>
<221> mRNA
<222> (1)...(1536)
<223> mouse vacuolar H+-ATPase
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<212> DNA
<213> Homo Sapiens

<220>
<221> mRNA
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<223> human vacuolar H+-ATPase (56,000 subunit -HO57)
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<213> Mus musculus

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<223> mouse ZAC1 zinc finger protein

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